

Amendments to the Claims

This listing of claims will replace all prior versions and listing of claims in the application.

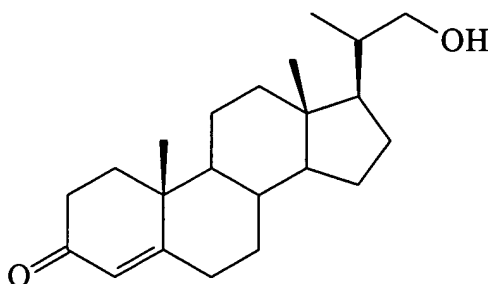
Please cancel claims 1 to 40, 42-46 and 48-53 without prejudice or disclaimer.

Please amend claims 41 and 47 as set forth below.

Please add new claims 54-68 as set forth below.

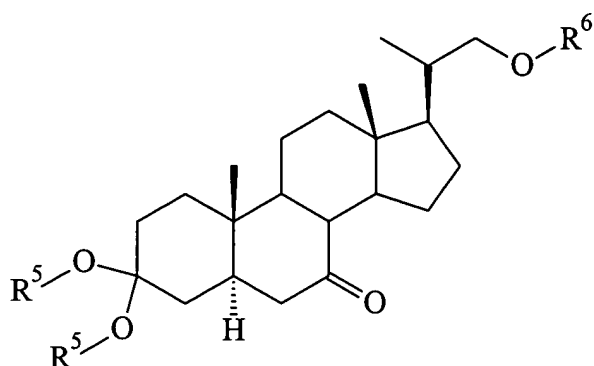
1-40. (canceled)

41. (currently amended): A method for preparing ~~producing an aminosterol compound selected from the group consisting of~~ squalamine, compound 1436, and salts thereof, the method comprising: converting, under sufficient conditions, a compound of ~~according to~~ formula 21 as follows:



(21)

to a compound of ~~according to~~ formula 125 125:



(125),

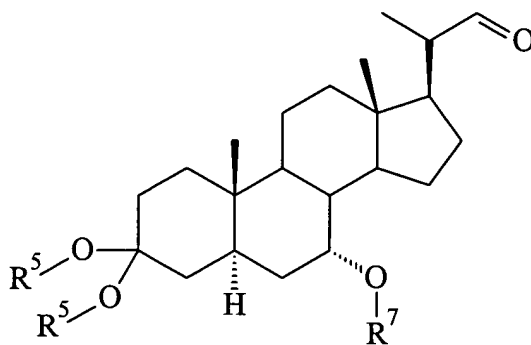
wherein

the R^5 groups are suitable protecting groups that can be the same or different, or the R^5 groups can join together to form a ring structure, and

R^6 is a suitable protecting group;

converting, under sufficient conditions, the a compound of formula 125 to a compound of

according to formula 129 129:

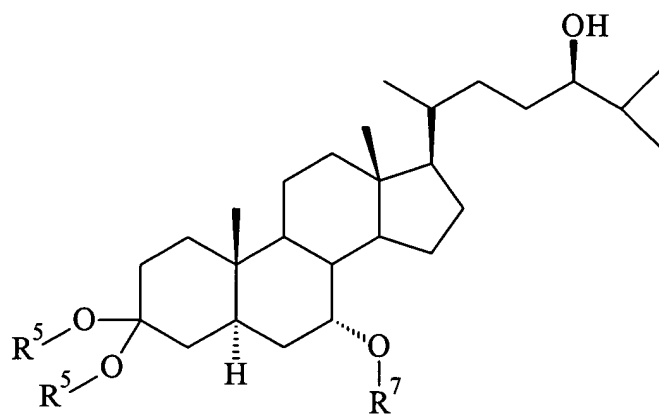


(129),

wherein the R^5 groups are suitable protecting groups that can be the same or different, or the R^5 groups can join together to form a ring structure, and R^7 is a suitable protecting group; group,

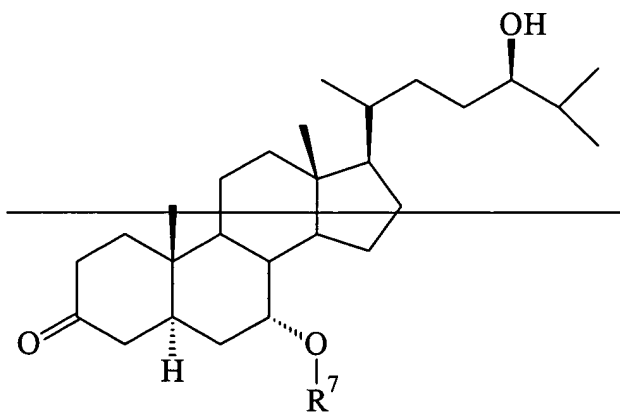
converting, under sufficient conditions, the compound of formula 129 to a compound of

according to formula 134 134:



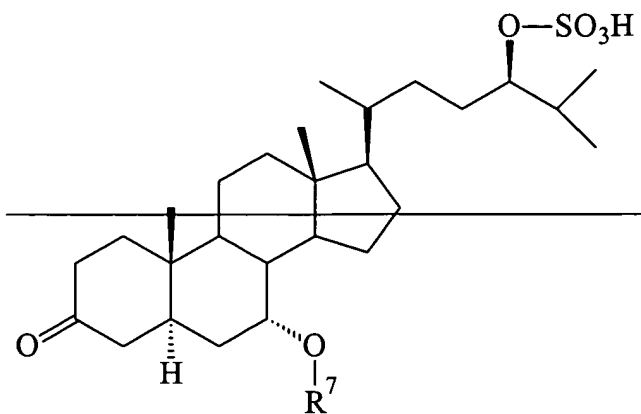
(134);

converting, under sufficient conditions, the compound according to formula 134 to a compound according to formula 135:



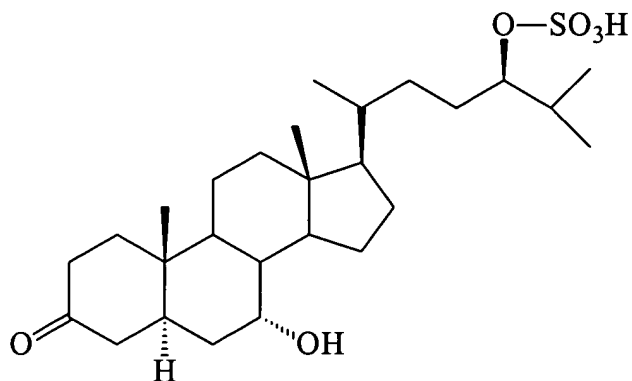
(135);

converting, under sufficient conditions, the compound according to formula 135 to a compound according to formula 136:



(136);

converting, under sufficient conditions, the compound ~~of according to formula 134~~ 136 to a compound ~~according to formula 37~~ 37:



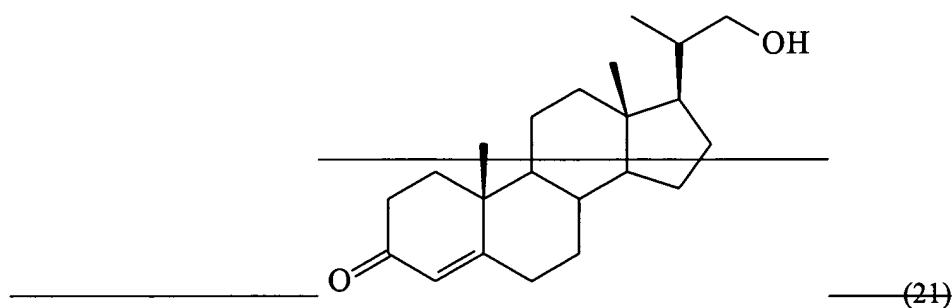
(37); and

converting, under sufficient conditions, the compound ~~according to formula 37~~ to squalamine; ~~compound 1436~~, or a salt thereof.

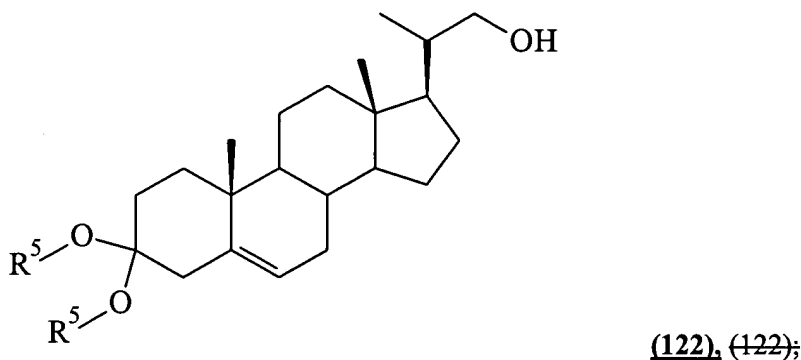
42-46. (canceled)

47. (currently amended): The A method according to claim 41, wherein the compound of formula 21 is converted to the compound of formula 125 by according to formula 129 is produced as follows:

converting, under sufficient conditions, the a compound of according to formula 21 as follows:



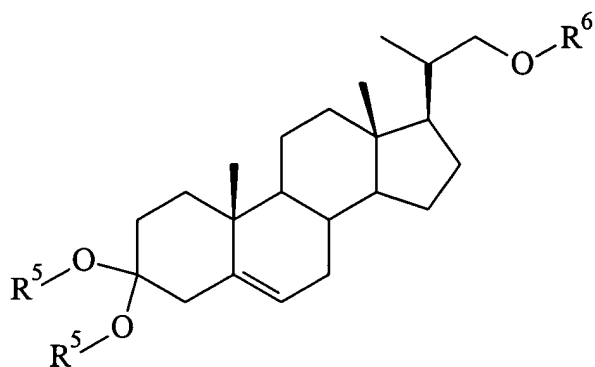
to a compound of according to formula 122 122:



wherein

the R⁵ groups are suitable protecting groups that can be the same or different, or the R⁵ groups can join together to form a ring structure;

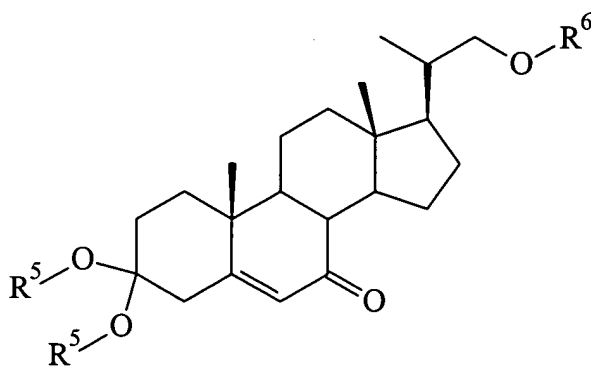
converting, under sufficient conditions, the compound of according to formula 122 to a compound of according to formula 123 123:



(123),

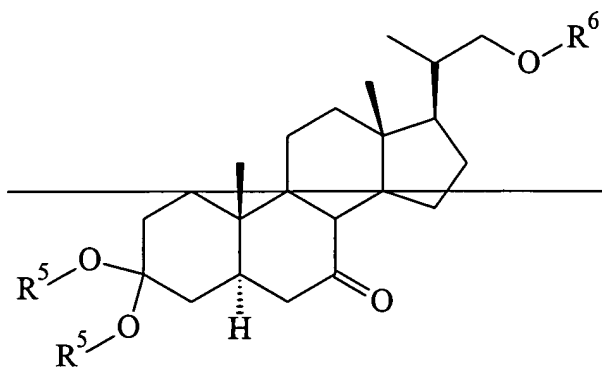
wherein R⁶ is a suitable protecting group;

converting, under sufficient conditions, the compound ~~of according to~~ formula 123 to a compound ~~of according to~~ formula 124 124:



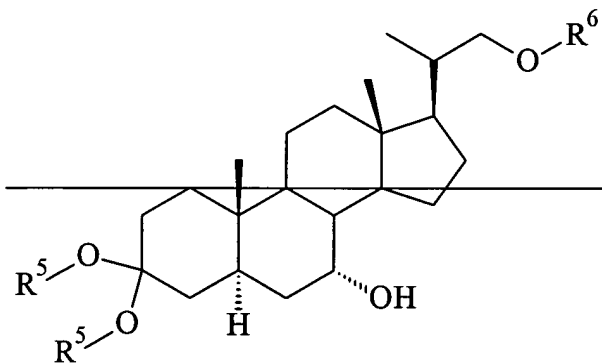
(124); and

converting, under sufficient conditions, the compound ~~of according to~~ formula 124 to the a compound ~~of according to~~ formula 125. 125:



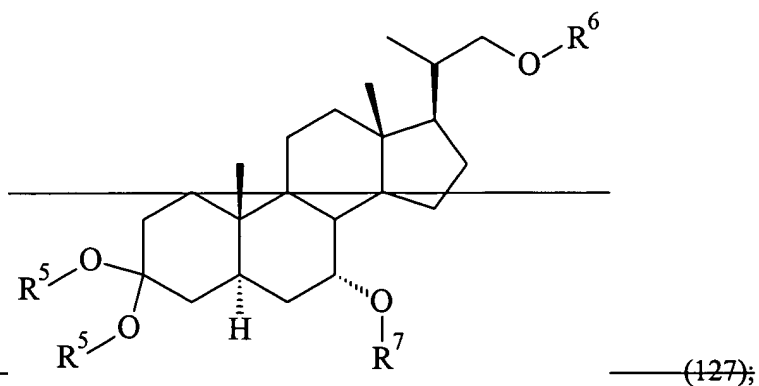
(125);

converting, under sufficient conditions, the compound according to formula 125 to a compound according to formula 126:

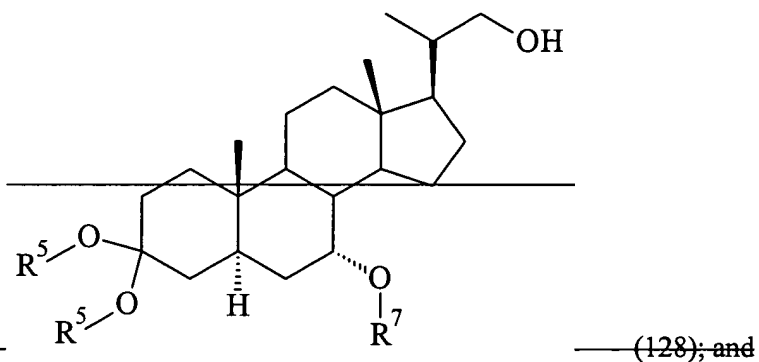


(126);

converting, under sufficient conditions, the compound according to formula 126 to a compound according to formula 127:



~~converting, under sufficient conditions, the compound according to formula 127 to a compound according to formula 128:~~



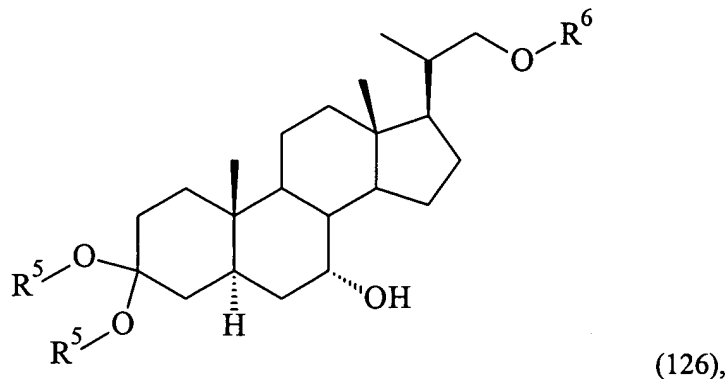
~~converting, under sufficient conditions, the compound according to formula 128 into the compound according to formula 129.~~

48-53. (canceled)

54. (new): The method according to claim 41, wherein the compound of formula 125 is converted to the compound of formula 129 by

converting, under sufficient conditions, the compound of formula 125 to a compound of formula

126



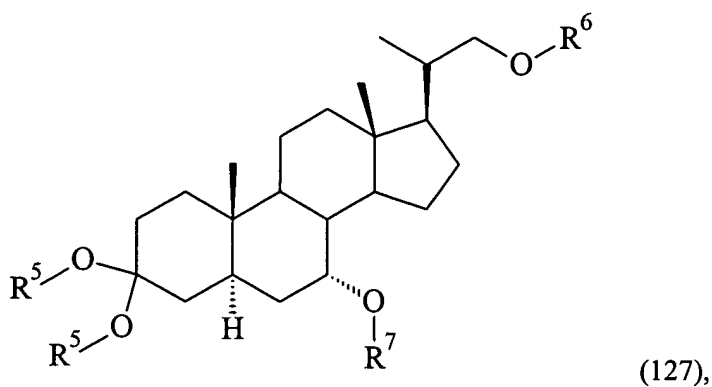
wherein

the R^5 groups are suitable protecting groups that can be the same or different, or the R^5 groups can join together to form a ring structure, and

R^6 is a suitable protecting group;

converting, under sufficient conditions, the compound of formula 126 to a compound of formula

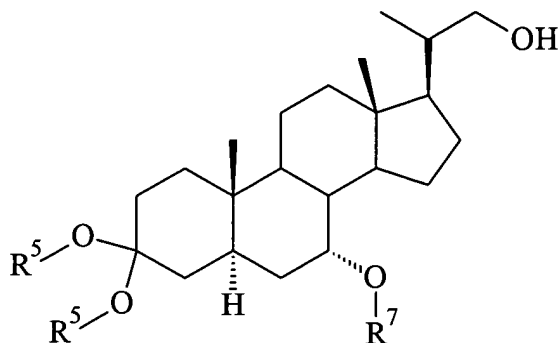
127



wherein R^7 is a suitable protecting group;

converting, under sufficient conditions, the compound of formula 127 to a compound of formula

128



(128); and

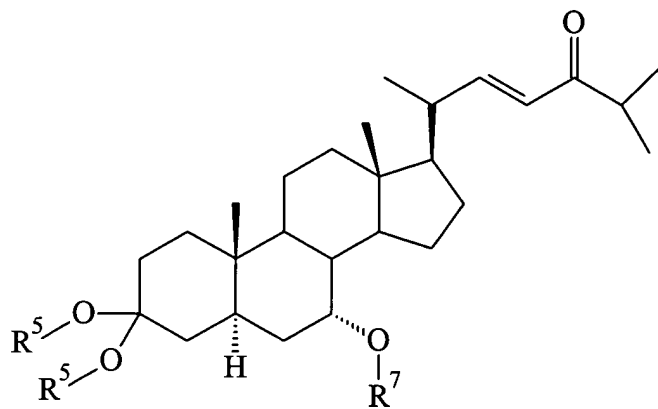
converting, under sufficient conditions, the compound of formula 128 to the compound of formula

129.

55. (new): The method according to claim 41, wherein the compound of formula 129 is converted to the compound of formula 134 by

converting, under sufficient conditions, the compound of formula 129 to a compound of formula

132



(132),

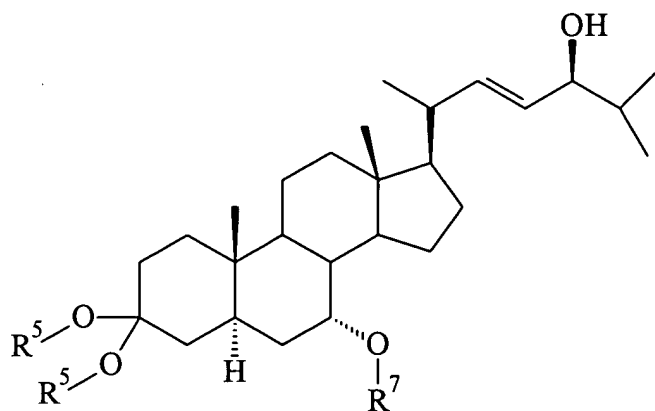
wherein

the R^5 groups are suitable protecting groups that can be the same or different, or the R^5 groups can join together to form a ring structure, and

R^7 is a suitable protecting group;

converting, under sufficient conditions, the compound of formula 132 to a compound of formula

133



(133); and

converting, under sufficient conditions, the compound of formula 133 to the compound of formula

134.

56. (new): The method according to claim 41, wherein the compound of formula 129 is converted to the compound of formula 134 by

converting, under sufficient conditions, the compound of formula 129 to a compound of formula

115



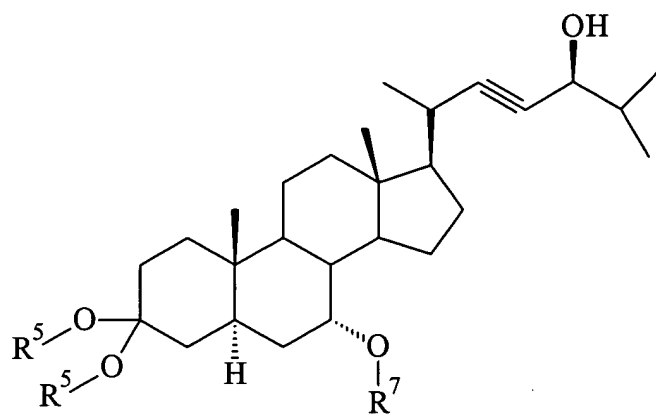
converting, under sufficient conditions, the compound of formula 115 to a compound of formula

116



converting, under sufficient conditions, the compound of formula 116 to a compound of formula

117



converting, under sufficient conditions, the compound of formula 117 to the compound of formula

57. (new): The method according to claim 41, wherein the compound of formula 134 is converted to the compound 37 by

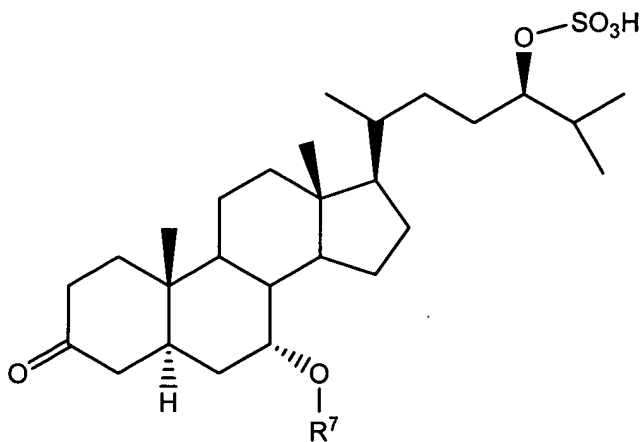
converting, under sufficient conditions, the compound of formula 134 to a compound of formula

The chemical structure shows a steroid nucleus with a ketone at C3 and a hydrogen at C13 shown with a wedge bond. At C14, there is a dashed bond to an oxygen atom, which is further bonded to a substituent labeled R⁷. At C17, there is a wedge bond to a side chain: -CH₂-CH₂-CH₂-CH(OH)-CH₃, where the hydroxyl group is shown with a wedge bond.

wherein R^7 is a suitable protecting group;

converting, under sufficient conditions, the compound of formula (135) to a compound of formula

136



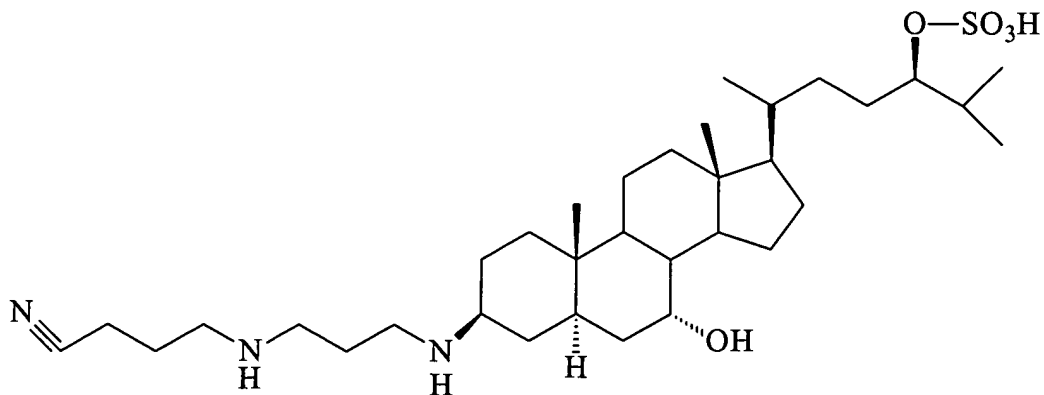
(136); and

converting, under sufficient conditions, the compound of formula 136 to the compound 37.

58. (new): The method according to claim 41, wherein the compound 37 is converted into squalamine by

converting, under sufficient conditions, the compound 37 into its corresponding potassium salt;

converting, under sufficient conditions, the potassium salt of the compound 37 into compound 43



(43); and

converting, under sufficient conditions, the compound 43 to squalamine or a salt thereof.

59. (new): The method according to claim 41, wherein the R⁵ groups are independently selected from C₁₋₆ alkyl.

60. (new): The method according to claim 41, wherein the R⁵ groups join together to form a ring selected from the group consisting of an ethylene dioxy ring, a 1,3-propanedioxy ring, a 2-methylene-1,3-propanedioxy ring and a 2,2-dimethyl-1,3-propanedioxy ring.

61. (new): The method according to claim 41, wherein R⁶ is selected from the group consisting of formyl, acetyl, propionyl, pivaloyl, cyanoacetyl, optionally substituted benzoyl, methoxycarbonyl, ethoxycarbonyl, benzyloxycarbonyl, optionally substituted benzyl, optionally substituted benzyloxymethyl (BOM), tetrahydrothiopyranyl, tetrahydrothiofuranyl, methylthiomethyl (MTM), trialkylsilyl, tetrahydropyranyl (THP), 2-methoxyethoxymethyl (MEM), and methoxymethyl (MOM).

62. (new): The method according to claim 61, wherein R⁶ is a trialkylsilyl.

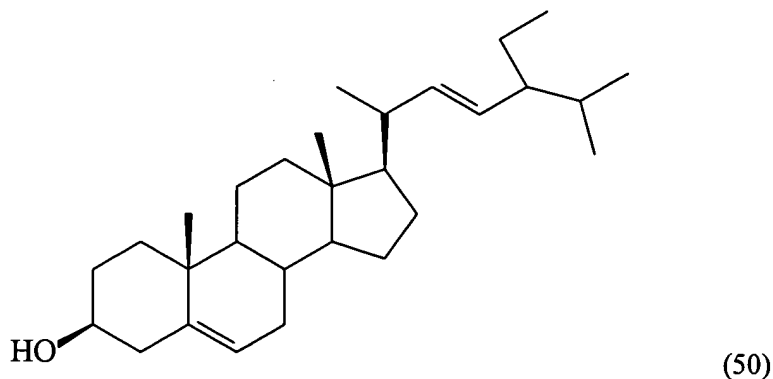
63. (new): The method according to claim 62, wherein R⁶ is tert-butyldimethyl silyl.

64. (new): The method according to claim 41, wherein R⁷ is selected from the group consisting of formyl, acetyl, propionyl, pivaloyl, cyanoacetyl, optionally substituted benzoyl, methoxycarbonyl, ethoxycarbonyl, benzyloxycarbonyl, optionally substituted benzyl, optionally substituted benzyloxymethyl

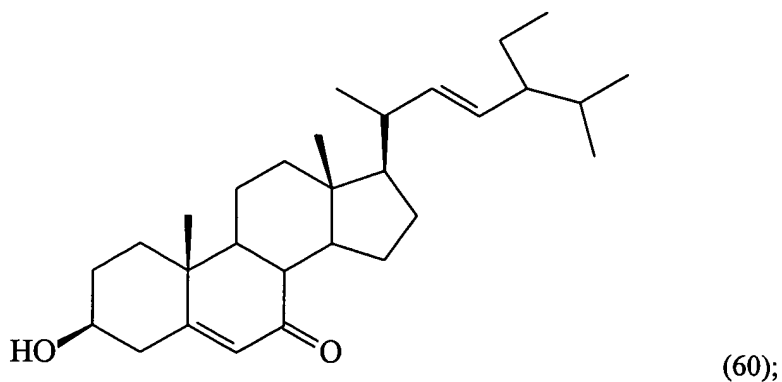
(BOM), tetrahydrothiopyranyl, tetrahydrothiofuranyl, methylthiomethyl (MTM), trialkylsilyl, tetrahydropyranyl (THP), 2-methoxyethoxymethyl (MEM), and methoxymethyl (MOM).

65. (new): The method according to claim 64, wherein R^7 is benzoyl.

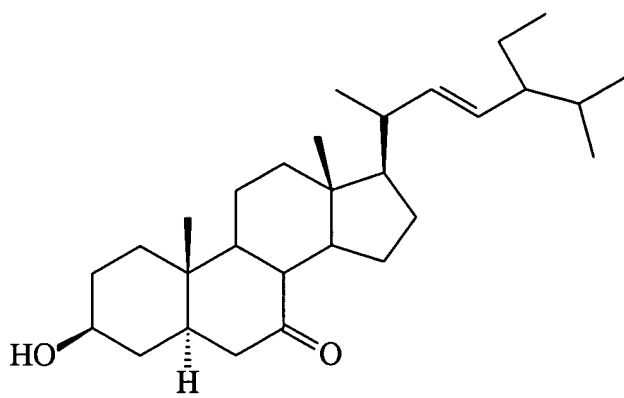
66. (new): A method for preparing squalamine and salts thereof, comprising converting, under sufficient conditions, compound 50



to compound 60

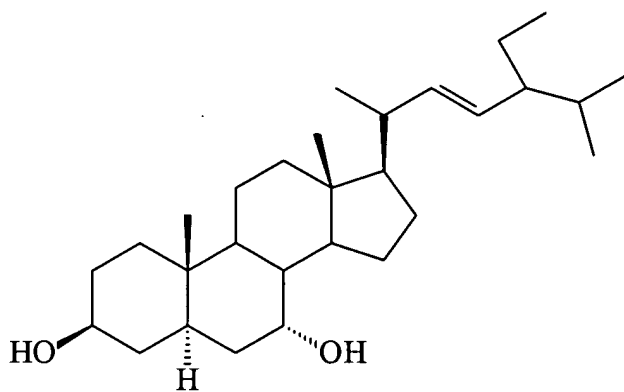


converting, under sufficient conditions, the compound 60 to compound 61



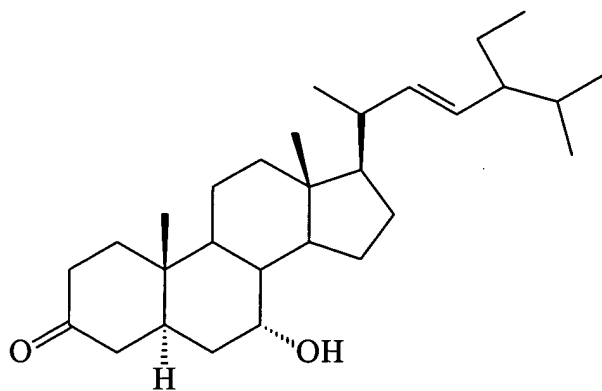
(61);

converting, under sufficient conditions, the compound 61 to compound 62:



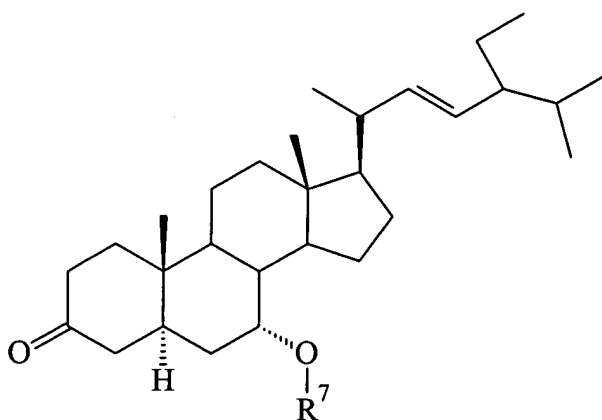
(62);

converting, under sufficient conditions, the compound 62 to compound 63:



(63);

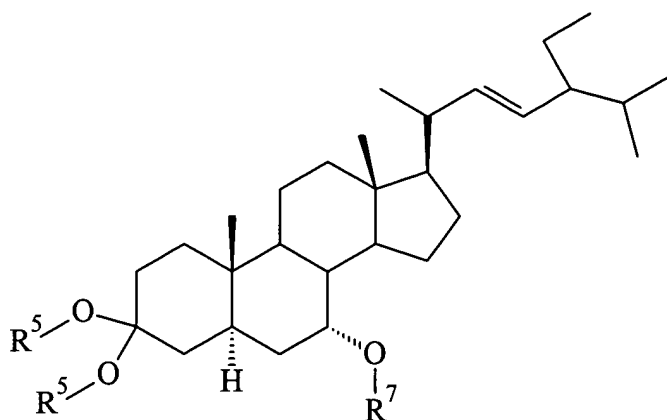
converting, under sufficient conditions, the compound 63 to a compound of formula 164



(164),

wherein R⁷ is a suitable protecting group;

converting, under sufficient conditions, the compound of formula 164 to a compound of formula

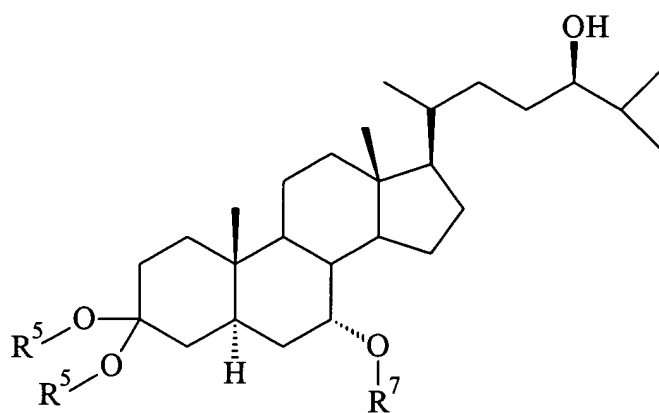


(165),

wherein the R^5 groups are suitable protecting groups that can be the same or different, or the R^5 groups can join together to form a ring structure;

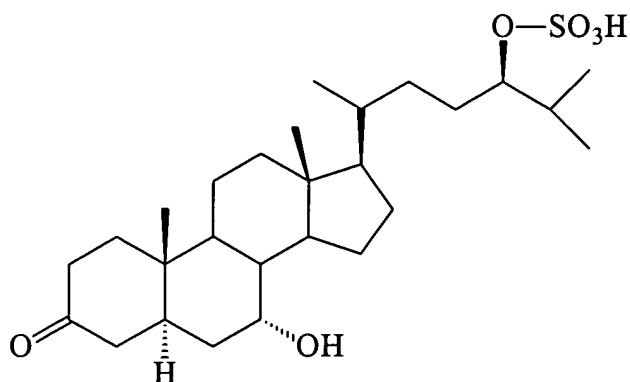
converting, under sufficient conditions, the compound of formula 165 to the compound of formula 129;

converting, under sufficient conditions, the compound of formula 129 to a compound of formula 134



(134);

converting, under sufficient conditions, the compound of formula 134 to compound 37



(37); and

converting, under sufficient conditions, the compound 37 to squalamine or a salt thereof.

67. (new): The method according to claim 66, wherein R^7 is selected from the group consisting of formyl, acetyl, propionyl, pivaloyl, cyanoacetyl, optionally substituted benzoyl, methoxycarbonyl, ethoxycarbonyl, benzyloxycarbonyl, optionally substituted benzyl, optionally substituted benzyloxymethyl (BOM), tetrahydrothiopyranyl, tetrahydrothiofuranyl, methylthiomethyl (MTM), trialkylsilyl, tetrahydropyranyl (THP), 2-methoxyethoxymethyl (MEM), and methoxymethyl (MOM).

68. (new): The method according to claim 67, wherein R^7 is benzoyl.